

REMARKS

This is in response to the Office Action mailed June 14, 2006. Reconsideration of this application is respectfully requested in view of this amendment.

A minor amendment has been made to claim 11 to correct antecedent basis issues. Another minor amendment has been made to claim 24 to correct spelling errors. No new matter has been added by these amendments.

STATUS OF CLAIMS

Claims 1-35 are pending.

Claims 1-35 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention.

Claims 1-35 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. 6,684,223 (Ganesh).

OVERVIEW OF CLAIMED INVENTION

The presently claimed invention provides for a system and method implementing a shared memory device (called Coupling Facility) that is used to record indoubt transaction entries for each member of a database cluster. The present invention's coupling facility communicates with the database cluster and a transaction manager and issues instructions to perform a ROLLBACK

or COMMIT based upon the recorded indoubt transaction entries in a coupling facility list structure.

REJECTIONS UNDER 35 U.S.C. § 112

Claims 1-35 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention.

The examiner states that claims 1-35 recite "...indoubt..." limitation that makes the claim indefinite.

Applicants wish to draw the examiner's attention to Section 2173.02 of the M.P.E.P. which explains:

"Definiteness of claim language must be analyzed, not in vacuum, but in light of:

(A) The content of the particular application disclosure;

(B) The teachings of the prior art; and

(C) The claim interpretation that would be given by one possessing the ordinary skill in the pertinent art at the time the invention of made."

It appears from page 2 of the Office Action of 06/14/2006 that the Examiner is erroneously assigning a literal meaning to the term "indoubt". Applicants respectfully remind the Examiner that the term "indoubt" is a known term of art that refers to a global transaction that was left in an uncertain state. Therefore, Applicants respectfully assert that the term

“indoubt” should have been readily recognizable (at the time of filing) by one of ordinary skill in the art of database programming, specifically one with knowledge in the area of XA and 2-phase commit protocols.

For further clarification, the Examiner is directed to Applicants’ “background of the invention” section, particularly, pages 4-7 of the application-as-filed, for a discussion relating to the resolution of indoubt units of work in regards to the XA protocol industry standard and known 2-phase commit protocols. Furthermore, Applicants wish to draw the examiner’s attention to pages 15, 18 and claims 3, 12, 22 and 31 which state that an indoubt transaction entry is created in the coupling facility list structure of the coupling facility when a “PREPARE TO COMMIT” instruction is received by a member of the database cluster from a transaction manager.

Also, the examiner asks the question: How is a computing apparatus going to be “indoubt” of recording data? Applicants wish to clarify that “indoubt transaction entries” will be recorded in a shared memory device for the system to be able to resolve these “indoubt” entries. In light of the above-discussion related to the term ‘indoubt’, it should be clear that the computing apparatus cannot be, as the Examiner suggests, doubtful of recording this data.

Hence, Applicants respectfully submit that the term “indoubt” signifies a definite meaning when used in conjunction with database operations such as a 2-phase commit operation. Therefore, based on the above-presented clarifications and based on the M.P.E.P. guidelines, Applicants respectfully request the Examiner to withdraw this specific 35 U.S.C §112 rejection with respect to claims 1-35.

The examiner also states that claims 22 and 24 of the Applicants' invention recite "coupling facility" and "coupling facility list", which makes these claims indefinite.

The applicant also wishes to draw the examiners attention to pages 11, 14-15, and 31 of the Application-As-Filed where the "Coupling facility" is referred to as a "shared memory device which is used to record "indoubt transaction entries". These indoubt transaction entries are created in a coupling facility list structure which in one embodiment contains, an XA global transaction identifier, a timestamp when the entry was created, and a state indicating the transaction is INDOUBT.

Hence, it can be seen that Applicants' "coupling facility" and "coupling facility list structure' have been adequately defined in the specification. Therefore, based on the above-presented clarifications and based on the M.P.E.P. guidelines, Applicants respectfully request the Examiner to withdraw this specific 35 U.S.C §112 rejection with respect to claims 1-35.

REJECTIONS UNDER 35 U.S.C. § 102

Claims 1-35 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. 6,684,223 (hereafter Ganesh). Applicant respectfully disagrees with the Examiner that the claims are taught by the cited art. The Manual For Patenting Examining Procedure (MPEP) § 2131 clearly sets forth the standard for rejecting a claim under 35 U.S.C. § 102(e). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." (MPEP § 2131, quoting Verdegaal Bros. v. Union Oil Co. of

California 2 USPQ2d 1051, 1053 (Fed Cir. 1987)). Applicants respectfully contend that the cited art (i.e., Ganesh) fails to teach the claimed invention as required by the MPEP.

Applicants' wish to respectfully note on the record that the Examiner, in pages 3-9 of the office action of 06/14/2006, has failed to specifically identify how the Ganesh reference provides for each of the claim feature with respect to the pending claims. Specifically, with respect to each of the rejected claims, the Examiner repeatedly uses the following citation:

“col. 2, lines 1-67, col. 2, lines 1-67, col. 3, lines 1-67, col. 4, lines 1-67, col. 5, lines 1-67, col. 6, lines 1-67, col. 7, lines 1-67, col. 8, lines 1-67, col. 9, lines 1-67, col. 10, lines 1-67, col. 11, lines 1-67, col. 12, lines 1-67, col. 13, lines 1-67, col. 14, lines 1-67, col. 15, lines 1-67, col. 16, lines 1-67, col. 18, lines 1-67, col. 19, lines 1-67”

Applicants wish to note on the record that the above-citations provide no specificity as it covers the entirety of the Ganesh patent, except col. 1 and col. 17. Applicants respectfully submit that such a citation (of an entire patent, with no specific comparison) is inconsistent with the guidelines set forth by the M.P.E.P. Applicants wish to remind the Examiner that it is the duty of the Examiner to specifically point out the relied-upon features (in the cited reference) such that applicants' are aware of how the examiner is applying a reference in a rejection. Specifically, §1.104(c)(2) of Title 37 of the Code of Federal Regulations and section 707 of the M.P.E.P explicitly states that “the particular part relied on must be designated” and “the

pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified”.

Due to lack of specificity, Applicants contend that the Examiner, in the office action of 06/14/2006, has failed to clearly point how the Ganesh reference applies to each and every feature of each rejected claim. In light of such an ambiguous rejection, Applicants wish to note that they are unable to respond with specificity, and the response provided below is addressed with respect to the Ganesh reference in its entirety.

The Ganesh reference describes a two-phase commit method and system wherein a coordinating database system examines log tracking data residing on the coordinating database system to determine whether a particular participating database system is prepared to commit, which reduces the number of messages transmitted between a coordinating database system and participating database systems.

The examiner, on page 3 of office action dated 06/14/2006, without any specific citation contends that Ganesh teaches each of the following features of Applicants’ claims: “recording indoubt transaction entries for each member of a database cluster via a shared memory device” and “upon detecting failure of a transaction manager, issuing instructions to perform a ROLLBACK or COMMIT based upon recorded indoubt transaction entries in shared memory device”. Applicants contend otherwise.

The applicant wishes to note that the Ganesh reference does not provide recitations for at least the following features of the independent claims of Applicants' invention (claims 1, 11, 22, and 30):

- i) a shared memory device (or coupling facility) communicating with a database cluster and one or more transaction managers (via an interface)
- ii) recording "indoubt transaction entries" for each member of the database cluster (in a coupling facility list structure of the shared memory device)
- iii) issuing instructions to perform COMMIT and ROLLBACK based upon the recorded indoubt transaction entries

Specifically, with respect to Applicants' independent claims 1, 11, 22, and 30, it appears that the Examiner is equating Ganesh's "external log tracking data" to Applicants' "indoubt transaction entries" or "indoubt entries". However, it is worth emphasizing that Applicants' "indoubt transaction entries" and "indoubt entries" are associated with a member of a database cluster. It is also worth emphasizing that Applicants' "indoubt transaction entries" and "indoubt entries" are recorded in a "shared memory device" or a "coupling facility".

By contrast, the log tracking data of the Ganesh reference merely indicates which log records have been written to non-volatile storage on participating database systems to determine if whether or not a particular participating database system is prepared to commit or not. There is no recitation of "indoubt transaction entries" being recorded in a shared memory device wherein instructions to create these entries are received from members of a database cluster.

Figure 1 of Ganesh illustrates their implementation which explicitly shows a first log 112 being associated with database system 110 and a separate second log 152 being associated with another database system 150. It is unclear how the Examiner is equating logs 112 and 152 to Applicants' shared memory device recording "indoubt transaction entries" or "indoubt entries".

It is also unclear how the Examiner is equating such disparate logs (i.e., 112 and 152) to a coupling facility list structure recording indoubt entries associated with each member of a remote database.

Applicants also submit that absent a showing of the above-mentioned features (i) and (ii), it would be moot to argue that Ganesh teaches the feature of issuing instructions to perform COMMIT and ROLLBACK based upon the recorded indoubt transaction entries in a shared memory device.

Hence, based on the arguments provided above, Applicants contend that the Ganesh reference fails to provide for many of the features of Applicants' independent claims 1, 11, 22, and 30.

If the Examiner still feels that the above features (i.e., a "shared memory device" recording indoubt transaction entries and a "coupling facility" recording indoubt transaction entries from each member of a remote database system) are taught by the Ganesh reference, it is respectfully requested that the Examiner specifically point in accordance with the guidelines of

the M.P.E.P. what element in Ganesh provides such a teaching, so Applicants can respond with specificity.

The above-mentioned arguments with respect to independent claims 1, 11, 22, and 30, substantially apply to independent claims 2-10, 12-21, 23-29, and 31-35 as they inherit all the limitations of the claim from which they depend. Hence, Applicants respectfully request the examiner to reconsider these claims (1-35) and withdraw the rejection in light of the arguments presented above.

SUMMARY

As has been detailed above, none of the references, cited or applied, provide for the specific claimed details of Applicants' presently claimed invention, nor renders them obvious. It is believed that this case is in condition for allowance and reconsideration thereof and early issuance is respectfully requested.

As this response has been timely filed, no request for extension of time or associated fee is required. However, the Commissioner is hereby authorized to charge any deficiencies in the fees provided to Deposit Account No. 09-0460.

If it is felt that an interview would expedite prosecution of this application, please do not hesitate to contact Applicants' representative at the below number.

Respectfully submitted,

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September 14, 2006